

METHOD AND APPARATUS FOR IMPROVING THE DYNAMIC
RANGE OF LASER DETECTED ULTRASONIC IN
ATTENUATIVE MATERIALS

5 ABSTRACT OF THE DISCLOSURE

10 A system for identifying ultrasonic displacements in a material under test
utilizing a time-varying output pulse of a first laser beam. The system includes a
seed laser light source for providing a laser beam, a modulating assembly in the
path of propagation of the laser beam for time-varying of the laser beam, at least
one optical isolation assembly placed in the path of propagation of the laser
beam for preventing reflected laser light feedback into the seed laser light
source, and at least one laser light amplification assembly placed in the path of
propagation of the laser beam for amplifying the laser beam which passes the
amplified time-varying output pulse of the laser beam.